

- BETTANAY, E., W. M. McARTHUR and F. J. HINGSTON. 1960. *The Soil Associations of Part of the Swan Coastal Plain, Western Australia*. Soils and Land Use Series No. 35, C.S. & I.R.O.
- EALEY, E. H. M., and H. SUIJENDORP. 1959. Pasture management and the Euro problem in the North-West. *J. Dept. Agr. W.A.* (ser. 3), 8 (3): 273-286.
- GARDNER, C. A. 1926. The salient features of the plant geography of extra-tropical Western Australia. In *Science in Western Australia*. Perth.
- GENTILLI, J. 1941. *Atlas of Western Australian Agriculture*. Perth.
- GENTILLI, J. 1958. Australien—Landwirtschaft, Viehzucht und Fischerei. Map in *Grosser Herder Atlas*. Freiburg.
- PERRY, R. A. 1958. Australien—Vegetation. Map in *Grosser Herder Atlas*. Freiburg.
- SERVENTY, D. L. 1948. The birds of the Swan River district, Western Australia. *Emu*, 47 (4): 241-286.
- WILCOX, D. G. 1960. Studies in the mulga pastoral zone, parts 1 and 2. *J. Dept. Agr. W.A.* (ser. 4), 1: 475-479, 581-586.
- WILLIAMS, R. J. 1955. Vegetation regions. Map in *Atlas of Australian Resources*. Canberra.
- WILLIAMS, R. J. 1959. Vegetation map of Australia. In *The Australian Environment*. C.S. & I.R.O.
- WOOD, J. G. 1950. Vegetation map of Australia. In *The Australian Environment*, 1st ed. C.S. & I.R.O., Melbourne.

FROM FIELD AND STUDY

Psilotum nudum at the Murchison River.—On August 24, 1960, R. J. Butler collected a fruiting specimen of the primitive pteridophyte, *Psilotum nudum* (Linn.) Griseb. = *Psilotum triquetrum* Swartz., from Pine Thicket Gorge on the Murchison River south of Galena. The specimen was found growing in a crevice in a sandstone cliff face and about 20 ft. above the high water mark of the river.

The geographical distribution of *Psilotum nudum* is pan-tropical with extensions into both northern and southern moist subtropical regions. In Australia it extends from northern Queensland into the coastal and mountainous regions of New South Wales and occurs again in rocky areas of the Grampians in Victoria. In Western Australia it is only known from a collection made by W. V. Fitzgerald in 1905 from the Sprigg and Charnley Rivers in the West Kimberley.

The Butler collection is noteworthy as being the more southerly known occurrence of *Psilotum nudum* in Western Australia.

—G. G. SMITH and R. J. BUTLER, Nedlands.

Kangaroo Bot Fly Larva from Port Hedland.—A single larva of the Kangaroo Bot Fly, *Tracheomyia (Oestrus) macropi* Frog. (Diptera: Oestridae), was submitted for identification by Mr. R. M. Sadleir of the Zoology Department, University of Western Australia. The specimen was collected on August 16, 1960, in the mouth (between the two bottom incisors and under the tongue) of a female red kangaroo (*Macropus rufus* Desmarest) at Mundabullangana Station (managed by Mr. R. Lukis), at Port Hedland, W.A.

The Kangaroo Bot Fly was named as such and the larvae de-

scribed as a new species by Mr. W. W. Froggatt in 1913 (*Agric. Gaz. N.S.W.*, 24: 567). His specimens were found crawling about in the mucus on the windpipes, just below the mouths, of kangaroos at Moramana Station, Walgett district, N.S.W.

The fly was previously represented, in the entomological collection of the W.A. Department of Agriculture, by specimens determined by Dr. S. J. Paramonov. These were some larvae, and an adult female, which had emerged from a pupa, obtained from a female red kangaroo at Warambie Station, Roebourne, W.A., in 1938.

—L. E. KOCH, Department of Agriculture.

Homing Performances by Senegal Doves.—On September 2, 1960, I caught a Senegal Dove (*Streptopelia senegalensis*) in a mist net at my home at 184 Salvado Road, Wembley. It was transported, concealed in a gladstone bag, to the C.S.I.R.O. Wildlife Survey Section's Laboratory at 33 Caporn Street, Nedlands, where it was ringed (070-06630) and released. On October 12 it was re-taken in an automatic trap by Mrs. B. Tormey at 188 Salvado Road, Wembley, a distance of 3 miles north of its release point.

A second dove was trapped by Mrs. Tormey at 188 Salvado Road in the late afternoon of November 4, 1960, and ringed by me (070-01218) and released (after transportation, concealed in a box) at the corner of Wariek Street and Wanneroo Road, 7½ miles north of its capture point. The dove was re-taken the following morning, November 5, by Mrs. Tormey at the original trap.

A third dove (070-06338) showed the best homing performances to date. It was caught and ringed at 184 Salvado Road on September 12, 1960. On November 3 it was re-trapped at 188 Salvado Road and released at 80 Matlock Street, Mt. Hawthorn (3 miles N.E.) It was re-trapped again at 188 Salvado Road on November 8 and released by Mr. A. Strawbridge at Upper Swan, about 17 miles N.E. On December 14 it was re-trapped for the third time at 188 Salvado Road.

Ringling of Senegal Doves, both at Caporn Street and Salvado Road, has indicated, through repeated recaptures, that these birds are highly sedentary and the performances of the three birds mentioned demonstrate that they will return to the home area even after being transported some distance away in a manner which precludes them from having visual knowledge of the route taken.

—R. H. STRANGER, Wembley.

Parthenogenesis in the Moth *Zermizinga indocilisaria*.—A study of the biology of the geometrid moth, *Zermizinga indocilisaria* Walker, made it appear that parthenogenesis occurs in this species.

In September, 1959, six small potted pines, *Thuja orientalis*, were placed in the biology laboratory at Guildford Grammar School. A few days later some twig mimicking looper caterpillars were seen eating the green leaves on the pines.

The caterpillars were overall pale brown in colour with darker brown patches, small black spots resembling bark scars distributed over the body breaking up the outline, and a stripe of greenish black